

1 **WE CLAIM:**

2 1. A covering system comprising:
3 a first membrane;
4 a first flotation member coupled to the first membrane, wherein the first flotation
5 member includes a first float and a first float compartment membrane, and
6 wherein the first float compartment membrane is coupled to the first
7 membrane; and
8 a first plurality of gas-relief passageways positioned either:
9 within the first float compartment membrane, or
10 within the first membrane and adjacent to the first flotation member;
11 wherein at least one of the gas-relief passageways within the first plurality is
12 structured so that gas flows unobstructed through it when the system is
13 used.

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15 2. The covering system of claim 1, wherein the first float is sealed in the first float
16 compartment membrane.

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18 3. The covering system of claim 1, wherein the first float compartment membrane is
19 coupled to the first membrane with at least a flotation member tie.

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21 4. The covering system of claim 1, wherein the first float compartment membrane is
22 coupled to the first membrane with at least a flotation member strap.

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24 5. The covering system of claim 1, wherein the first float compartment membrane is
25 coupled to either an upper surface or a lower surface of the first membrane, and wherein
26 the first float is positioned between the first membrane and the first float compartment
27 membrane.

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29 6. The covering system of claim 1, wherein the first flotation member is coupled to
30 the first membrane so as to elevate the first plurality of gas-relief passageways above at
31 least a portion of the first membrane when the system is used.

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7. The covering system of claim 1, further comprising:
 - a second membrane;
 - a second flotation member coupled to the second membrane, wherein the second flotation member includes a second float and a second float compartment membrane, and wherein the second float compartment membrane is coupled to the second membrane;
 - a flotation member link coupling the first flotation member to the second flotation member; and
 - a second plurality of gas-relief passageways positioned either:
 - within the second float compartment membrane, or
 - within the second membrane and adjacent to the second flotation member;wherein at least one of the gas-relief passageways within the second plurality is structured so that gas flows unobstructed through it when the system is used.
8. The covering system of claim 1, further comprising:
 - a second flotation member coupled to the first membrane, wherein the second flotation member includes a second float and a second float compartment membrane, and wherein the second float compartment membrane is coupled to the first membrane; and
 - a flotation member link coupling the first flotation member to the second flotation member.
9. The covering system of claim 1, further comprising:
 - a second flotation member coupled to the first membrane, wherein the second flotation member includes a second float and a second float compartment membrane, the second float compartment membrane is coupled to the first membrane, and the second flotation member is spaced apart from the first flotation member; and

- 1 a first elongated weight positioned on an upper surface of the first membrane and
- 2 between the first and second flotation members.
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- 4 10. The covering system of claim 9, further comprising:
- 5 a second elongated weight positioned on an upper surface of the first membrane at
- 6 an angle to either the first flotation member, the second flotation member,
- 7 or the first elongated weight.
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- 9 11. The covering system of claim 1, further comprising:
- 10 an anchor system coupled to an edge of the first membrane, the anchor system
- 11 comprising:
- 12 a weighted member extending along and coupled to at least a portion of
- 13 the edge of the first membrane.
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- 15 12. The covering system of claim 11, wherein the anchor system further comprises a
- 16 connector coupled to the edge of the first membrane.
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- 18 13. The covering system of claim 12, wherein the connector includes a sleeve.
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- 20 14. The covering system of claim 1, further comprising:
- 21 a service opening positioned within the first membrane, the service opening being
- 22 defined by a service opening edge and being spaced apart from the first
- 23 flotation member and the first plurality of openings;
- 24 a second flotation member coupled to the first membrane so as to elevate the
- 25 service opening edge above a body containing some liquid when the
- 26 system is used; and
- 27 a service opening membrane coupled to the service opening edge.
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- 29 15. The covering system of claim 14, further comprising:
- 30 a service opening weight coupled to the service opening membrane and spaced
- 31 apart from the service opening edge.

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16. A covering system comprising:
a first membrane having a width;
a first float coupled to the first membrane, the first float having a width that is not
more than twenty-five percent of the width of the first membrane; and
a second membrane coupled to the first membrane so as to define gas-relief
openings between the first and second membranes.

17. The covering system of claim 16, wherein the first float is sealed in a first float
compartment membrane, and wherein the first float compartment membrane is coupled to
the first membrane.

18. The covering system of claim 16, wherein the first float is coupled to the first
membrane with a first float compartment membrane, wherein the first float compartment
membrane is coupled to either an upper surface or a lower surface of the first membrane,
and wherein the first float is positioned between the first membrane and the first float
compartment membrane.

19. The covering system of claim 16, further comprising:
a second float coupled to the first membrane, the second float being spaced apart
from the first float; and
a first elongated weight positioned on an upper surface of the first membrane and
between the first and second floats.

20. The covering system of claim 19, further comprising:
a second elongated weight positioned on an upper surface of the first membrane at
an angle to either the first float, the second float, or the first elongated
weight.

21. The covering system of claim 16, further comprising:

1 an anchor system coupled to an edge of the first membrane, the anchor system
2 comprising:
3 a weighted member extending along and coupled to at least a portion of
4 the edge of the first membrane.
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6 22. The covering system of claim 21, wherein the anchor system further comprises a
7 connector coupled to the edge of the first membrane.
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9 23. The covering system of claim 22, wherein the connector includes a sleeve.
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11 24. The covering system of claim 16, further comprising:
12 a service opening positioned within the first membrane, the service opening being
13 defined by a service opening edge and being spaced apart from the first
14 float and the gas-escape openings;
15 a second flotation member coupled to the first membrane so as to elevate the
16 service opening edge above a body containing some liquid when the
17 system is used; and
18 a service opening membrane coupled to the service opening edge.
19

20 25. The covering system of claim 24, further comprising:
21 a service opening weight coupled to the service opening membrane and spaced
22 apart from the service opening edge.
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24 26. A floating cover comprising:
25 a first membrane;
26 a service opening positioned within the first membrane, the service opening being
27 defined by a service opening edge;
28 a flotation member coupled to the first membrane so as to elevate the service
29 opening edge above a body containing some liquid when the system is
30 used; and
31 a service opening membrane coupled to the service opening edge.

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2 27. The floating cover of claim 26, further comprising:
3 a service opening weight coupled to the service opening membrane and spaced
4 apart from the service opening edge.
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6 28. A venting method comprising:
7 coupling a first membrane to a first flotation member, wherein the first flotation
8 member includes a first float and a first float compartment membrane, and
9 wherein the coupling includes coupling the first float compartment
10 membrane to the first membrane;
11 forming gas-relief passageways either:
12 within the first float compartment membrane, or
13 within the first membrane and adjacent to the first flotation member; and
14 elevating at least a portion of the first membrane:
15 so as to cause the first membrane to float when placed over a body
16 containing some liquid; and
17 so that gas from the body is unobstructedly vented to atmosphere through
18 at least one of the gas-relief passageways.
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20 29. The venting method of claim 28, wherein the coupling includes welding the first
21 float compartment membrane to the first membrane.
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23 30. A venting method comprising:
24 coupling a first membrane having a width to a first float having a width that is not
25 more than twenty-five percent of the width of the first membrane;
26 coupling a second membrane to the first membrane so as to define gas-relief
27 openings between the first and second membranes;
28 placing the coupled first and second membranes over a body containing some
29 liquid; and

1 elevating the gas-relief openings over the body so that gas from the body is
 2 unobstructedly vented to atmosphere through at least one of the gas-relief
 3 openings.

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 5 31. The venting method of claim 30, wherein the coupling the second membrane to
 6 the first membrane includes welding the second membrane to the first membrane.

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 8 32. A method of venting gas from a body containing some liquid, comprising:
 9 placing a covering system over the body, the covering system comprising:
 10 a first membrane having an outer edge and a width;
 11 a first flotation member coupled to the first membrane, wherein the first
 12 flotation member includes a first float and a first float compartment
 13 membrane, the first float has a width that is not more than twenty-
 14 five percent of the width of the first membrane and a first float
 15 compartment membrane, and the first float compartment
 16 membrane is coupled to the first membrane;
 17 elevating portions of the first membrane above the body; and
 18 positioning the covering system to allow gas from the body to vent to atmosphere
 19 around the outer edge of the first membrane.
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